

## **Possibility between earthquake and explosion seismogram differentiation by discrete stochastic non-Markov processes and local Hurst exponent analysis**

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### **Abstract**

The dynamic, kinetic, and spectral properties of seismic signals depicting earthquake (EQ) and technogenic explosion (TE) modulation were studied using two methods: one based on seismograms considered in the form of a discrete non-Markov statistical process, and another on the generalized conception of the Hurst exponent. These methods enabled to explicitly determine some features of several different states of the Earth's crust: states of the Earth before and during strong and weak EQs, during TEs. The two methods allowed to present the seismogram analyzed in the form of a set non-Markov variables and parameters.

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